In the Claims:

1. (Currently amended) A modified recombinant host cell, which, in unmodified form, does not produce polyketides, which cell is modified to contain an expression system that comprises at least one nucleotide sequence that encodes [[for]] a minimal polyketide synthase (PKS) capable of being expressed and an expression system that comprises at least one nucleotide sequence that encodes for a holo acyl carrier protein (ACP) synthase capable of being expressed and effective in the pantetheinylation of said PKS,

said minimal PKS comprising a ketosynthase/acyl transferase (KS/AT) catalytic region, a chain-length factor (CLF) catalytic region and an acyl carrier protein (ACP) activity for an aromatic PKS; or

said minimal PKS comprising a KS catalytic region, an AT catalytic region, and an ACP activity for a modular PKS or a fungal PKS.

D28

2. (Original) The modified cell of claim 1 which is *E. coli* or yeast.

3. (Currently amended) The modified cell of claim 1 wherein said minimal PKS is the synthase for 6-methyl salicylic acid.

4. (Cancelled)

5. (Original) The modified cell of claim 1 wherein said expression system for said minimal PKS and said expression system for said holo ACP synthase are present on separate vectors.

6. (Original) The modified cell of claim 1 wherein at least one of said expression systems is integrated into the host cell chromosome.

7. (Cancelled)

8. (Currently amended) A modified recombinant host cell, which in unmodified form does not produce polyketides, modified to contain either

a) at least a first and a second vector ~~two vectors~~; said first vector containing a first selectable marker and a first expression system and said second vector containing a second selectable marker and a second expression system and optionally additional vectors containing additional selectable markers and expression systems wherein said expression systems contained on said vectors are effective to produce at least a minimal polyketide synthase (PKS); or

b) at least one vector and a modified chromosome, said one vector containing a first selectable marker and a first expression system and said modified chromosome containing a second expression system and optionally additional vectors containing additional selectable markers and expression systems wherein said expression systems contained on said vectors in combination with said expression system on said chromosome are effective to produce at least a minimal PKS;

said minimal PKS comprising a ketosynthase/acyl transferase (KS/AT) catalytic region, a chain-length factor (CLF) catalytic region and an acyl carrier protein (ACP) activity for an aromatic PKS; or

said minimal PKS comprising a KS catalytic region, an AT catalytic region, and an ACP activity for a modular PKS.

9. (Original) The cell of claim 8 which is a yeast cell, an *E. coli* cell, an actinomycete cell or a plant cell.

10. (Currently amended) The cell of claim 8 which further contains an expression system for a cell-based detection system that comprises at least one nucleotide sequence that encodes for a polyketide responsive target for a functional polyketide.

11. (Currently amended) The cell of claim 8 which produces at least a minimal aromatic PKS and which contains:

(a) a first vector comprising a first selectable marker and an expression system comprising a nucleotide sequence encoding a KS/AT catalytic region operably linked to a promoter operable in said cell;

(b) a second vector comprising a second selectable marker and an expression system comprising a nucleotide sequence encoding a CLF catalytic region operably linked to a promoter operable in said cell; and

(c) a third vector comprising ~~containing~~ a third selectable marker and an expression system which comprises a nucleotide sequence encoding an ACP activity operably linked to a promoter operable in said cell.

D28 cont

12. (Currently amended) The cell of claim 8 which produces at least a minimal modular PKS and which contains

(a) a first vector containing a first selectable marker and a[[n]] first expression system, wherein said first expression system comprises a nucleotide sequence encoding for at least a first ~~one~~ module of a polyketide synthase (PKS) operably linked to a promoter operable in said cell; and

(b) a second vector containing a second selectable marker and a second expression system, wherein said second expression system comprises a nucleotide sequence encoding for at least a second module of a polyketide synthase operably linked to a promoter operable in said cell.

13. (Currently amended) The cell of claim 12 wherein said first module is that of a first polyketide synthase (PKS) and said second module is that of a second PKS, wherein said first and second PKS are ~~derived from different polyketide synthases~~ different.

14. (Currently amended) The cell of claim 13 wherein said nucleotide sequence encoding at least ~~one~~ a first or a second module further contains a nucleotide sequence encoding a ketoreductase (KR) activity; or

wherein the nucleotide sequence encoding at least ~~one~~ a first or a second module ~~encodes~~ further contains a nucleotide sequence encoding a KR and a dehydratase (DH) activity; or

wherein said nucleotide sequence encoding at least ~~one~~ a first or a second module ~~encodes~~ further contains a nucleotide sequence encoding a KR, DH and an enoylreductase (ER) activity; and/or

wherein said nucleotide sequence encoding at least ~~one~~ a first or a second module ~~encodes~~ further contains a nucleotide sequence encoding a thioesterase (TE) activity.

D28 cont

15. (Cancelled)

16. (Currently amended) The cell of claim 8 which is further modified to contain a recombinant expression system for a holo ACP synthase capable of being expressed and effective in the pantetheinylation of said PKS.

17. – 29. (Cancelled)

30. (Currently amended) A vector adapted for expression in yeast which vector contains a selectable marker operable in yeast, and an expression system which comprises [[the]] a coding region of at least one functional ~~polyketide synthase~~ catalytic activity of a polyketide synthase operably linked to a promoter operable in yeast.

31. (Original) A yeast cell modified to contain the vector of claim 30.

32. (Currently amended) The yeast cell of claim 31 which further contains a recombinant expression system for a holo ACP synthase capable of being expressed and effective in the pantetheinylation of said PKS.

33. (Original) A method to produce a polyketide synthase activity which method comprises culturing the yeast cell of claim 31 under conditions wherein expression is favored.

34. (Original) A method to produce a polyketide synthase activity which method comprises culturing the yeast cell of claim 32 under conditions wherein expression is favored.

35-36. (Cancelled)

D28 Cont

37. (Currently amended) [[The]] An *E. coli* cell ~~of claim 36~~ which ~~further~~ contains a vector comprising a selectable marker operable in *E. coli*, and an expression system which comprises the coding region of at least one functional catalytic activity of a polyketide synthase operably linked to a promoter operable in *E. coli* and a recombinant expression system for a holo ACP synthase capable of being expressed and effective in the pantetheinylation of said PKS.

38. (Cancelled)

39. (Currently amended) A method to produce a functional polyketide synthase ~~activity~~ which method comprises culturing the *E. coli* cell of claim 37 under conditions wherein expression is favored.

40. (New) The cell of claims 1, 16, 32, or 37, wherein the holo ACP synthase is derived from *Bacillus*.

41. (New) The cell of claims 1, 16, 32, or 37, wherein the holo ACP synthase is EntD, GsP, ACPS, or sfp.

D28 cont